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# The effects of online social networking on retail consumer dynamics in the attractions industry: The case of 'E-da' World theme park, Taiwan.

Anestis K. Fotiadis, Nikolaos Stylos

## *Abstract*

*Purpose of this study is to examine the trends in retail consumers' consumption dynamics and patterns of purchase behavior within this new-technology-mediated environment. A behavioral purchase model was developed and tested to understand the ways social networks influence the decision making of individuals planning to visit a theme park. In particular, the proposed model delineates how online social networking (OSN) experience factors affect actual use (AU) of social media for purchasing of theme park services through an assessment of perceived usefulness (PU) and perceived ease of use (PEOU). An electronic survey was conducted with members of a theme park's brand fan page on the Facebook social media site namely, the E-da World Theme park in the southern Taiwanese city of Kaohsiung. Smart PLS 3, a partial least squares analysis, was employed to examine a series of eleven research hypotheses. The findings revealed a series of statistically significant influences from five exogenous variables on PU and PEOU, as well as the mediating role of PU on the PEOU – AU relationship. The results also provide important practical implications both for academics and practitioners by shedding light on the way social media works to encourage and support online purchasing of amusement services."*

**Keywords:** *Social Networking, theme park, attraction and entertainment services, Partial Least Squares Analysis, online purchasing, Taiwan*

## **1. Introduction**

The start of the new millennium has been uniquely characterized by the rapid adoption of personal electronic communications, which through the extension to smartphones and tablet PCs has enabled consumers to share their behavior, feelings and experiences with other individuals and organizations via the Internet and social networking sites in particular (Popp & Woratschek, 2015). From those beginnings online communities that have developed that actually exhibit many aspects now characterized as contemporary social life (Jahn & Kunz, 2012). These communities now have great relevance to their members who may derive part of their own self-concept from “knowledge of their membership in a social group together with the value and emotional significance attached to that membership” (Tajfel, 1981, p. 255). Interactions within these online communities influence both members’ and non-members’ attitudes and behavior (Algesheimer, Borle, Dholakia, & Singh, 2010) and may be instrumental in enhancing purchases in many consumer markets (Adjei, Noble, & Noble, 2010). Along with extensive financial and business discussions many current academic investigations demonstrate that a wide mixture of retail services and products are now driven by ‘smart’ electronic technologies (Roh, Kunnathur, & Tarafdar, 2009; Theodoridis & Priporas, 2009, 2013), which have impacted on organizational processes and selling activities in a number of ways (Pantano & Timmermans, 2014): (i) providing new ways of collecting and transferring knowledge from and to consumers and managing information for developing new marketing strategies, (ii) creating of smart partnerships with clients (who are actively involved in service co-creation), and (iii) supporting the emergence of new sources of

competitive advantage within the social commerce sphere (Litvin, Goldsmith, & Pan, 2008). In addition there is evidence that they are changing the nature of contemporary society especially in their interaction with the commercial world where, for example social media communities related to a specific company or brand may contribute to the formation of hybrid retail channels that are alternatives to the ones traditionally offered for product distribution because the new generation of systems enriches organizational capabilities and management practices with innovative and cost-effective marketing options (Pantano, 2014).

Theme parks are a central feature of the amusement park and attractions industry (IAPPA, 2012) and contribute significantly to many Asian economies by generating both revenue and employment. Being at the forefront of modern technological and engineering applications for both operations and communications has always been a feature of the industry since the first theme park in its modern form appeared in the USA in 50s (Pais, Costa, & Fernandes, 2001). Today, the modern theme park forms a unique retail environment in the ‘smart’ tourism context, with services and merchandise being sold to visitors both off-line and online (Rosen & Howard, 2000). In many cases, these entertainment centers are part of large retailing complexes (Feeny, Vongpatanasin, & Soonsatham, 1996; Fotiadis, 2016). Themed retail stores, restaurants and food outlets are located inside the theme park and sales of a wide variety of merchandise is regularly taking place (Fotiadis & Vassiliadis, 2016). The unique retail environment of the theme park means that profits can be significantly increased because of these stores and their strong appeal to the retail consumer (R. Kumar & Reza, 2003). Today, smart consumer technologies, such as smartphone apps and online portals, have also become an indispensable component of leisure experience and have greatly influenced the visitors’ purchasing behavior (X. Wang, Li, Zhen, & Zhang, 2016). Smartphone apps of

existing social networking platforms have increased penetration and extended awareness of products and services to the wider network of internet users due to their ubiquitous and flexible nature of communication (K. Y. Kim & Lee, 2015; Persaud & Azhar, 2012; D. Wang, Xiang, & Fesenmaier, 2014). For instance, there are 24 theme parks operating in Taiwan and all of them have their own fan pages in Facebook. This seems to imply an understanding of the benefit that Flavian and Guinaliu (2006) noted — social media members seek comprehensive and direct information that assists in better evaluation of goods or services. However, in the Web 3.0 era, digital marketing communications not only plays an important role in amplifying customers' information exchange and awareness but also supports direct purchase through an attraction's retail service operations, reservation systems and customer relationships, thereby facilitating service, retail and associated goods sales (e.g. entertainment attractions, rides, and souvenirs) (Floyd, Freling, Alhoqail, Cho, & Freling, 2014).

It should be noted that up until now most research regarding the contribution of online social networking to the marketing of theme parks has focused on the role of electronic word of mouth communication and its effect on the formation of positive attitudes (Hsu, 2012; Murray & Waller, 2007; Weber, 2009). These studies examined the impact of social networks on people's interactions and information exchange, e.g. sharing of common interests, goals, activities, comments, thoughts, and opinions before-during-after theme park visits (Boyd & Ellison, 2007; W. Kim, Jeong, & Lee, 2010). However, Huang and Benyoucef (2015) demonstrated that a gap in these investigations is the lack of a systematic model that delineates and operationalizes the relationships among the various antecedents of perceived usefulness (PU) of social networking and actual use (AU) of social media in the context of the entertainment industry and theme parks in particular. In addition there is limited research

about how those antecedents of social networks involvement in general (and Facebook in particular) are able to boost theme parks' sales revenues from entrance tickets, souvenirs and other memorabilia.

Addressing these issues, this study sets out to investigate how the use of social networking platforms influences actual online purchase behavior of individuals. In particular, the effects of the five online social networking (OSN) experience factors remain uncertain (Agarwal & Karahanna, 2000; E. Kim & Lee, 2007; G. Kim, Park, & Oh, 2008; Kwon & Wen, 2010) and knowledge of the use of social media in purchase decision making (AU) and how it operates through two dimensions of usefulness – PU and PEOU (Davis, 1989) – is required. To do so, a modified version of Technology Acceptance Model (TAM) originally developed by Davis (1989) is applied to the attractions industry using the views provided by Srite and Karahanna (2006) and additions suggested by Turner, Kitchenham, Brereton, Charters, and Budgen (2010). The applicability of this set of the five OSN factors was confirmed on the basis of a broad literature review as factors relevant to social networking and include: social identity (Kwon & Wen, 2010; Mittal & Pani, 2010), interaction (Seol, Lee, Yu, & Zo, 2016; Srivastava & Kaul, 2014; Y. Wang & Yu, 2015), information (Cheung, Chiu, & Lee, 2011; Hsu, 2012), structure (Czerwinski & Larson, 2002; Tan & Wei, 2006) and recognition (Blackshaw & Nazzaro, 2006; S. Kim, Kim, & Wise, 2014).

The primary objective of this study is to unravel the nature of those factors associated with the importance of social networking platforms in selecting and purchasing theme park services that are over and above the idea of information sharing (Boyd & Ellison, 2007; W. Kim et al., 2010). The second objective aims at highlighting the pivotal roles of use and perception (both

PU and PEOU) in an explanatory mechanism for understanding the relationship between the five OSN experience factors and the AU of social media as a precursor to online purchasing of theme park services.

This research makes important theoretical and practical contributions to the area of retail consumer dynamics within a leisure industry context. Theoretically, it sheds light on the complexity of relationships between the online experience factors and OSN users' perceptions, which may ultimately influence the actual use of OSN for online retail purchases (Constantinides, Romero, & Boria, 2009; Xu-Priour, Truong, & Klink, 2014). From a practical viewpoint, this study draws attention to the antecedents of online users' buying behaviour that might serve as a basis for creating well targeted OSN communication activities to support the online retailing of goods and services in the amusement and leisure industry (Rose, Hair, & Clark, 2011; Sotiriadis & van Zyl, 2013; Toñita Perea y, Benedict, & Ko de, 2004).

## **2. Literature Review**

### *2.1 Social media, retailing and theme park services*

Operating in a consumption-driven society, organizations are actively seeking ways to differentiate their brands by promoting memorable experiences, rather than just specific product attributes (Hollenbeck, Peters, & Zinkhan, 2008). For example most organizations in the attractions industry have already made their websites available in mobile device formats and use online social networking actively as a channel for most of their marketing and sales-related promotions in an effort to respond to visitors' demand for online services mobility

(Funk, 2007; Larivière et al., 2013). As Laroche, Habibi, Richard, and Sankaranarayanan (2012, p. 1763) noted “brand communities established on social media enhance feelings of community among members and contribute to creating value for both members and the company” where the members of these online communities feel intrinsically connected because they share similar interests, values, thoughts and even philosophies of life (Muniz & O’Guinn, 2001; Zaglia, 2013).

Renko and Druzijanic (2014) indicate that retail managers now predict social media will be one of the technologies with the most significant impact on current and future retailing. Chung, Chung et al. (2016) move one step further suggesting a segmentation of consumer clusters based on the relationship with social media and promotional activities in retail environment, i.e. social observers, active contributors, social connectors, and moderate contributors. Addressing the impact of social media on retailing directly, Echchakoui (2015) postulates that social media affects direct retail sales of goods and services through social networks marketing communication by creating value for customers through firm/sales promotion, reducing customers’ risk, and promoting sales trustworthiness. Hence, online social networking sites, dominated by Facebook (Waters, Burnett, Lamm, & Lucas, 2009) offer much more than just additional opportunities for socializing, information transmission, ideas exchange, personal interaction, sharing interests and exploring activities — they are an exciting new emerging vehicle linked to the actual buying process for goods and services retailing (Constantinides et al., 2009; Kwon & Wen, 2010). Specifically, a successful social media retail campaign would potentially offer an integrated social commerce platform allowing opportunities for self-creation, creating mass visibility, converting prospects to customers and increasing spending of existing customers (Chung et al., 2016; V. Kumar et al.,



2010). Going even further, Andzulis, Panagopoulos, and Rapp (2012) note that social media sites can undergo a transformation process toward functioning as complementary sales channels or in some cases even taking over as the primary distribution channel. The same researchers amplify the future importance of social media by suggesting that “social media will be the backbone strategy that directs how customer and company collaborate to co-create value in the sales process” (p. 307).

As many researchers have noted, theme parks’ digital marketing orientation fosters active participation of visitors’ in online communities enhancing their overall leisure experience (Brown, Kappes, & Marks, 2013; Weber, 2009) and developing trust and commitment with the associated retail brands (Flavian & Guinaliu, 2006; O’Cass & Carlson, 2012; Pantano & Priporas, 2016). This ultimately leads to increased park revisits, and greater merchandise and souvenir sales (Kabani, 2013; Stylos, Vassiliadis, Bellou, & Andronikidis, 2016). In this vein, the presence of theme parks in social media platforms and the associated interaction with potential visitors and fans is a valuable marketing framework for improving provision of amusement services because social networking allows consumers to develop their online profile including personal data that indicates their preferences (Buhalis & Law, 2008), thereby finding purchase specific information faster than ever before. Nevertheless, despite the behavior of individuals posting and sharing travel-related comments, opinions, and personal experiences remaining commonplace and important (S. Kim et al., 2014) there are now new opportunities that arise from using social media as a way to encourage online retailing of their ancillary goods and services. This occurs via the uploading of customized software applications (apps) to facilitate an online social networking sales channel (Kaplan & Haenlein, 2010; Kwon & Wen, 2010). As some researchers have noted (Chevalier & Mayzlin, 2006;

Hughes, Rowe, Batey, & Lee, 2012; Hvass & Munar, 2012), social networking sites and user-generated content platforms, are not only communications and advertising focused but also contribute directly to potential visitors' decision making processes when selecting a tourism destination, sharing post-visit experience, influencing purchases of entertainment services and related goods, and offering a complementary distribution channel.

## *2.2 Social Media Perceived Usefulness and Perceived Ease of Use*

'Ease of use' is a term that has been widely used in information technology studies over a number of decades (Davis, 1989) and is related to the level of effort a user needs to exert in using an information system (Agarwal & Prasad, 1999). Regarding acceptance of new-technology in the electronic retail sector, Müller-Seitz, Dautzenberg, Creusen, and Stromereder (2009) indicated that ease of use significantly affects both perceived usefulness and acceptance of using new technology. Kirk, Chiagouris, and Gopalakrishna (2012) in their research investigating perceived usefulness found it was significant for adopting digital products. Similarly, Rese, Schreiber, and Baier (2014) examined how technology is accepted for online reviews at the point of sale and they concluded that perceived ease of use exerts a significant effect on perceived usefulness of the system supplying that information.

## *2.3 Social Identity*

Social networks, such as Facebook, require setting a profile that will convey information such as name, age, gender or location along with other data, although some users do not display their real names but identify with a nickname which represents a limit to the extent to which they will reveal their true identity in a social network. As Hogg and Terry (2000) spotted a long time ago, social group identity can have a significant impact on attitude. It can

affect the intention to belong to a virtual community (Song & Kim, 2006) and it can affect the way members of a group sustain and improve their own self-image (Ely, 1994). Furthermore social identity can influence interaction with others as the perception of belonging to a community will further support specific group identification. Members of a group with a common social identity have a high level of solidarity, they follow in-group norms and they are negative on outgroups' models (Riedlinger, Gallois, McKay, & Pittam, 2004). As a result, several social media platforms consider identity as a core factor to develop and promote new ideas and products that encourage its development. Companies forced by this new social dynamic have begun looking for their own social media sites to develop their own proprietary strategies. Users tend to share their identities on social media sites such as Facebook and Twitter, but they still worry about how their private information is being handled (Whittaker & Gillespie, 2013). This is why the most common problem mentioned about sharing social identity is concern about privacy (Al-Debei, Al-Lozi, & Papazafeiropoulou, 2013; Kietzmann, Hermkens, McCarthy, & Silvestre, 2011; Litvin et al., 2008). OSN users wonder if businesses and companies use their information for data mining and surveillance (Kietzmann et al., 2011) and question the extent to which social media sites passively facilitate or actively encourage these activities. Due to companies' tendency to satisfy existing customers' and prospects' needs, OSN services are devised to increase users' satisfaction by supporting brand fan pages thereby increasing interaction between members. Again, social identity is a key construct in this behavior due to users' sharing personal data and engaging with the OSN group website that leads to an improved online experience. Users will be more satisfied when members of the group are willing to share information related to activities and give word of mouth responses related to their experiences on possible questions by other members (Erickson,

2002; Kwon, 2004). Overall we would therefore expect social identity to have a positive influence on perceived usefulness.

*H<sub>1</sub>: Social identity significantly and positively affects perceived usefulness.*

On the other hand, as social identity is highly important, perceived ease of use would potentially be affected by the way users think about social identity. OSN services are designed to increase users' satisfaction and therefore aim at supporting interaction across the membership or fan base, which itself leads to the creation of an identifiable and unique social identity (Kang, Tang, & Fiore, 2014; Leung & Tanford, 2015). To put this differently, a more identifiable social group identity may influence the ease of use of the OSN platform because members' activities through the OSN are supported by increased involvement with the OSN site (Seol, Lee, Yu, & Zo, 2016). Hence, we would expect that a more clearly defined social identity will have a positive influence on perceived ease of use of a social network service.

*H<sub>2</sub>: Social identity significantly and positively affects perceived ease of use.*

## *2.4 Recognition*

Most OSN-fan-pages administrators seek recognition for their OSN site and would like to know if their fan page URL comes first within the list of search results displayed by a search engine. It is normal for a social network related to a company or group to be updated frequently and this may affect their relationship with search engines. How search engines rank group fans pages is also very important for future users (Xiang & Gretzel, 2010) because current users "tag", "poke" or "like" different aspects of a group fan page, which in turn affects the way a search engine will treat the group in the future. As Gretzel (2006) mentions, social media sites are extremely search engine friendly and search engine results and the

display of that ranking can influence user's attention and loyalty levels (Blackshaw & Nazzaro, 2006).

*H<sub>3</sub>: Recognition significantly and positively affects perceived usefulness.*

*H<sub>4</sub>: Recognition significantly and positively affects perceived ease of use.*

## *2.5 Information*

Social media users are interested in search and exchange of information which is the main reason they become members of a group on a social network (Cheung et al., 2011). Users can easily discover information about opening hours, offers and customer communications from their network. In addition, they may receive updated information about changes that might have occurred in product specifications or pricing and from pictures and videos they can judge if the place is worth visiting again or not. This is why members of a social network say that information is the main reason for use and that it can help them make more objective judgments about the business and its product or services (Flavian & Guinaliu, 2006). For some users, participating in activities is dependent on what information they received (Park, Kee, & Valenzuela, 2009). Since social networking is a tool that can let companies collect information about customers as well as spread information to customers (Hsu, 2012) it is important to know if this information transfer is affecting perceived usefulness and ease of use. As García-Crespo, Colomo-Palacios, Gómez-Berbís, and Ruiz-Mezcua (2010) mentioned, the usefulness of social networking sites is mainly focused on the information that is being disseminated. Usually members like to share information such as links to external news, videos or photographs, from both the company and group members and

then utilize the “wall” or instant messaging to make announcements and answer questions (Carrera et al., 2008).

*H<sub>5</sub>: Information significantly and positively affects perceived usefulness.*

*H<sub>6</sub>: Information significantly and positively affects perceived ease of use.*

## *2.6 Interaction*

Srivastava and Kaul (2014) examine the impact of social interaction on customer experience in retail industry in India. They concluded that customer experience and satisfaction are affected by social interaction. This interaction results in a sharing process that represents the extent to which users exchange, distribute, and receive content. The nature of this interaction is important for social network group administrators as it can affect the way users perceive the SN group. They can allow members to post text or pictures on the group “wall” or give them the opportunity to add their own member to the group. So, when it is allowed, various kinds of interactions may occur, such as member to member, group to member or member to group. Based on social theory, if a relationship is frequent and long-lasting we call it strong (Krackhardt, 1992), while if it is infrequent or short duration we call it weak (Hansen, 1999). Organizations seek to develop relationships with their members which is why they implement strategic virtual communication strategies to encourage long-lasting relationships (Kelleher, 2006) as continuous interactivity is essential for that to occur (Jo and Kim (2003). Users may believe that there is little reason to join a fan page if they do not perceive a process of dynamic communications occurring within that community (Preece, Nonnecke, & Andrews, 2004) which may actually be a precondition for success of the network itself. (McCarthy et al., 2010).

According to Fakun (2009) one of the six factors that may determine perceived ease of use is the users' interaction with the software application as measured by the statement "My interaction with the application is clear and understandable". Consequently product developers need to carefully consider the human-computer interaction and usability to provide the best user interface. Similarly, Akour, Alshare, Miller, and Dwairi (2006) investigated 'ease of use' utilizing two question items related to user's interaction with the application. The premise here is that users usually define future actions based on previous interaction history (Ziefle, 2002), since perceived interaction quality can directly affect users' future intentions (Zhang, Liu, Yan, & Zhang, 2016). Therefore, users may develop better skills in using social media platforms as a result of their interaction with OSN; hence, PEOU may improve due to increased users' interaction with the social media. Therefore, it is anticipated that:

*H<sub>7</sub>: Interaction among OSN group members significantly and positively affects perceived usefulness of OSN.*

*H<sub>8</sub>: Interaction among OSN group members significantly and positively affects OSN perceived ease of use.*

## *2.7 Structure*

As the main goal in designing a social media group site is to make users more satisfied it is important to find what level of structure is most appropriate. Unfortunately, as Tan and Wei (2006) state, generally the structure a user prefers and the structure data providers offer don't match because it seems that user performance is optimum when a structure is on a moderate level (Czerwinski & Larson, 2002). Overall, a user should have a good overview of the social

media group page to decrease the intellectual effort needed to establish a cognitive map of the group structure.

*H<sub>9</sub>: OSN group page structure significantly and positively affects perceived usefulness.*

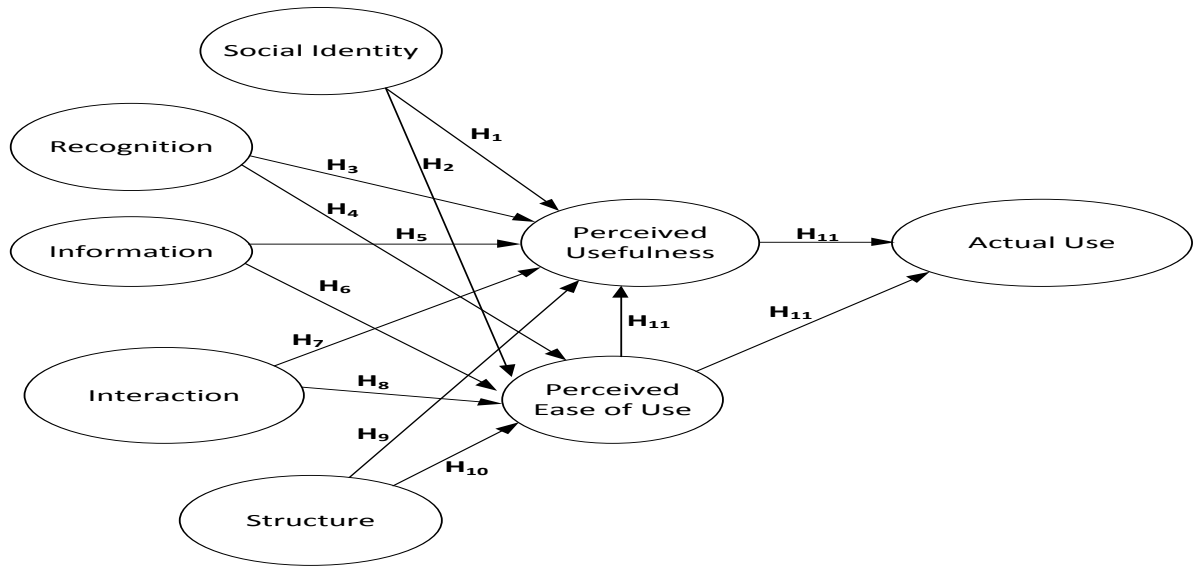
*H<sub>10</sub>: OSN group page structure significantly and positively affects perceived ease of use.*

Finally, it is expected that perceived usefulness would function as a transmitting mechanism for the effect of ease of social media use on actual use for purchases.

*H<sub>11</sub>: Perceived Usefulness positively mediates the relationship between perceived ease of use and actual use for purchasing online retail services.*

All these factors can be addressed in a version of the TAM (Technology Acceptance Model) and tested according to the following three modifications: (1) five experience factors are included as explanatory variables in the model to explain PU and PEOU of social networking platforms; (2) 'attitude' is excluded according to the suggestions in conceptualization of TAM by Srite and Karahanna (2006) and Thong, Hong, and Tam (2006); and (3) the 'behavioral intention to use' construct is replaced with 'actual use' to better reflect users' online purchase behavior. The overall model presented here posits that OSN experience factors - social identity, recognition, information, interaction and structure - all influence the formation of OSN users' attitude toward PU and PEOU, which in turn increases the level of AU (see Figure 1). To test the proposed relationships, a quantitative research study was conducted using a newly established Asian theme park.





**Figure 1:** Conceptual model.

### 3. The case of E-da World theme park

E-da World theme park is a popular theme park in Kaohsiung, Taiwan. As one of the most recently established theme parks in the country it is regarded as a good case for the current research study because it offers visitors a wealth of amusement and leisure services for children and adults and is famous for its distinctive architecture and style, and it plays an important role in the southern Taiwanese economy as a part of a wider hospitality, entertainment and educational network, which includes a shopping mall, two hotels, several restaurants, cafeterias and theatres, as well as a university. In addition, the park's administration and marketing operations consistently engage with online communications and social media in specific, as a means of attracting new visitors and retaining previous customers.

#### 3.1 Methodology

Following the recommendations of Malhotra, Birks, and Wills (2013), a pilot study was first carried out. A convenience sample of 10 Facebook E-da World theme park fans were personally interviewed through Skype and asked for their honest opinions regarding the difficulty of the questions, the actual wording and the structure/layout of the electronic questionnaire. All relevant comments were recorded and considered in the development of the final version of the questionnaire. For the main survey to be conducted the self-administered questionnaire was uploaded to Google Docs and a link was provided in the E-da World theme park Facebook fan page to allow potential respondents to access the survey instrument (Andrews, Nonnecke, & Preece, 2003).

Weisberg (2005) asserts that missing data often occur when respondents skip some questions. Since all questions in the survey were mandatory (i.e. respondents were required to fill in answers for all questions before submitting the survey); no missing data were reported in this study.

A structural equation modeling (SEM) approach using partial least squares (PLS) technique was employed in order to measure and estimate the relationships between latent constructs, as well as to test the significance of the paths between constructs. PLS-SEM estimates all path coefficients simultaneously enabling researchers to avoid biased and inconsistent parameter estimates (White, Varadarajan, & Dacin, 2003). The estimation of partial model relations that occurs as an iterative sequence of ordinary least squares regressions indicates that with the PLS technique the multivariate normality assumption can be relaxed (Esposito-Vinzi, Trinchera, & Amato, 2010). This is achieved by devising an asymptotic distribution-free estimation using sample sizes in excess of 200 (Gefen & Straub, 2005). Furthermore, sample

size considerations should still be considered such that Hair, Ringle, and Sarstedt (2011) recommend a minimum sample size of ten times the largest number of paths leading toward a structural model construct.

The main reason for employing PLS-SEM instead of covariance-based (CB) SEM is that the objective of data analysis in this study is prediction and theory building, rather than confirmation of structural relationships (Hair et al., 2011). Because the proposed model presents a number of variations from the original TAM, the exploration of the underlying relationships would be better supported by PLS that maximizes the explained variance of the dependent latent constructs (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). Sample size is a second reason for selecting PLS-SEM approach, because CB-SEM would require a sample of 345 usable cases (15 times the total number of observed variables) to successfully apply the maximum likelihood estimation technique (Golob, 2003; Hair, Black, Babin, & Anderson, 2010). Univariate normality of the dataset was not an issue, since both skewness and kurtosis were found within limits posed in the literature (Mertler & Vannatta, 2004; Thode, 2002) for all independent variables (see Appendix B). Same conclusion was derived for multivariate normality, which was checked by testing for outliers via Cook's distance (CD) analysis; the test did not indicate any outliers that would be flagged as influential, since in all cases it was found that  $CD_i < 1$  (Stevens, 1984).

In this study, the sample size recommendations provided by Cohen (1992) were followed based on a 1% level of significance and a statistical power of 80%, with minimum  $R^2$  equal to 0.10 (most conservative case), and maximum number of arrows pointing at a latent variable being equal to 4 (i.e. PU, PEOU). Thus, the a-priori minimum sample size estimation is 191.

Since the total usable sample gathered through the Facebook e-survey was 234 respondents, it was deemed that the minimum sample size requirements were satisfied.

Cross-sectional studies regarding relations between behavioral constructs raise concerns about the existence of common method bias (Doty & Glick, 1998; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Thus, a common latent factor (CLF) was introduced to check on the common variance among all observed variables following the guidelines provided by MacKenzie and Podsakoff (2012). This was executed by examining the statistical significance of regression weights of the CLF and comparing the variances of each indicator explained by its corresponding latent construct and the CLF (Liang, Saraf, Hu, & Xue, 2007). The factorial scheme of SmartPLS 3.0 was used to conduct a confirmatory factor analysis (CFA) in order to explicitly specify the pattern of loadings of the measurement items on the latent constructs in the model (Esposito-Vinzi et al., 2010).

### 3.2 Sampling and data collection

An on-line survey was conducted via E-da World theme park Facebook brand fan page during 1<sup>st</sup> March to 30<sup>th</sup> April 2014. The questionnaire consisted of eight sections and it was distributed to E-da World theme park Facebook page members through an open call for participation. The questionnaire was available in both English and Chinese offering respondents the opportunity to choose their preferred version according to their cultural or ethnic origin. Respondents were informed that the survey was optional and they could withdraw at any time. Furthermore, participants were assured that collected data would be handled carefully, no individual person's results would be published and their identity would remain confidential. Sampling was conducted via the snowball technique by prompting E-da

World fans to ask their Facebook friends to also take the survey. The targeted population consisted of E-da World fans Facebook members older than 16 years of age. In total, 354 E-da World Facebook members were approached and 251 of them initially agreed to participate in the online field study. Ultimately, 234 subjects clicked on the relevant link and fully completed the online questionnaire, thus resulting in a response rate of 66.1%.

Specific actions have been undertaken to avoid or minimize coverage, sampling, non-response and measurement errors (Davidshofer & Murphy, 2005). To minimize coverage error, the sampling process targeted only the Facebook users' profiles of E-da World theme park fans. All data were collected under the same conditions and all respondents were provided with identical information regarding the nature and purpose of the research study. Reduction in possible measurement errors was achieved through the use of a balanced formulation of scale categories (7-point Likert scales). Regarding the random sampling error, it is evident that this can be minimized by setting an increased sample size (Zikmund & Babin, 2007). Hence, in the current study, the final sample size of 234 resulted in a sampling error of 3.7% at 95% confidence level. Non-response error is considered to be low since a 66.1% response rate was achieved overall (Baumgartner & Steenkamp, 2001). As far as response styles was concerned, acquiescence was controlled by avoiding any usage of vague or ambiguous wording (Knowles & Condon, 1999) and midpoint response tendencies for uncertain answers was tackled by including an extra point in the response scheme, namely "0 = I don't know/I cannot reply" (Weijters, Cabooter, & Schillewaert, 2010).

## **4. Results**

### **4.1 Sample profile**

Of the total sample of 234 Facebook users, 48.3% were male and 51.7% were female, with all respondents residing in Taiwan. In terms of educational level, 70.9% had a bachelor's degree, 12.8% had a high school diploma, 3.8% engaged in vocational training and 12.4% were at the post-graduate level. The distribution of marital status was 58.4% married and 45.2% single.

#### 4.2 PLS-SEM results

The convergent validity, discriminant validity, and reliability of all the multiple-item scales were assessed against the guidelines published in published literature (Hair et al., 2010). Internal consistency, composite reliability and average variance extracted (AVE) were used as measures of scale reliability and validity, respectively. Cronbach's alpha values were found to vary between 0.620 and 0.869, while composite reliability values range from 0.775 to 0.921, both satisfying the acceptability condition for alpha, namely  $CR > 0.70$  (Bagozzi & Kimmel, 1995; Hair et al., 2010) and AVE values range from 0.562 to 0.854 (See Table 1), which is higher than the cut-off value of 0.5 ( $p < 0.01$ ) (Fornell & Larcker, 1981). Discriminant validity was checked by comparing the AVE value of each construct to the square of the correlations between that same construct with the rest of the latent variables. Table 2 presents the square root of AVE in the diagonal, whereas the rest of the values correspond to the correlations for each pair of constructs; those correlation values have been found smaller than the ones in the diagonal, thus supporting a claim of discriminant validity.

**Table 1:** Assessment of the measurement model

Constructs/ Items*	Mean (SD)	Loadings	Std. Error	T-statistic	Cronbach's alpha	CR	AVE
Social identity					0.803	0.910	0.835

soc1	3.25 (1.15)	0.908	0.018	49.60			
soc2	3.39 (1.03)	0.920	0.013	68.74			
<b>Recognition</b>					<b>0.650</b>	<b>0.788</b>	<b>0.562</b>
rec1	3.41 (0.99)	0.823	0.027	30.57			
rec2	3.98 (1.01)	0.534	0.091	5.84			
rec3	3.68 (0.90)	0.852	0.020	41.22			
<b>Information</b>					<b>0.869</b>	<b>0.911</b>	<b>0.719</b>
inf1	3.70 (0.96)	0.877	0.017	51.11			
inf2	3.66 (0.91)	0.888	0.017	50.93			
inf3	3.65 (0.89)	0.832	0.027	30.34			
inf4	3.95 (0.90)	0.790	0.029	26.37			
<b>Interaction</b>					<b>0.827</b>	<b>0.876</b>	<b>0.591</b>
int1	3.65 (0.93)	0.759	0.045	16.62			
int2	3.47 (0.92)	0.681	0.067	10.17			
int3	3.69 (0.87)	0.793	0.040	19.67			
int4	3.61 (0.88)	0.788	0.026	29.69			
int5	3.83 (0.84)	0.805	0.028	28.46			
<b>Structure</b>					<b>0.771</b>	<b>0.868</b>	<b>0.687</b>
str1	4.03 (0.87)	0.796	0.030	26.01			
str3	3.67 (0.95)	0.816	0.031	26.16			
str4	3.78 (0.90)	0.871	0.021	41.91			
<b>PU</b>					<b>0.741</b>	<b>0.885</b>	<b>0.793</b>
usf1	3.84 (0.86)	0.911	0.010	91.56			
usf2	3.49 (0.93)	0.870	0.021	40.60			
<b>PEOU</b>					<b>0.829</b>	<b>0.921</b>	<b>0.854</b>
Peou1	3.76 (0.86)	0.924	0.012	75.90			
Peou2	3.77 (0.87)	0.924	0.012	77.54			
<b>AU</b>					<b>0.620</b>	<b>0.775</b>	<b>0.633</b>
act1	3.28 (1.05)	0.817	0.030	26.89			
act2	4.10 (1.04)	0.773	0.044	17.69			

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\* Abbreviation of items correspond to questionnaire items as provided in appendix A

**Table 2:** Discriminant validity of the measurement model

		1	2	3	4	5	6	7	8
1	AU	<b>0.795</b>							
2	Information	0.637	<b>0.848</b>						
3	Interaction	0.646	0.766	<b>0.769</b>					
4	PEOU	0.643	0.731	0.734	<b>0.924</b>				
5	PU	0.679	0.687	0.734	0.813	<b>0.891</b>			
6	Recognition	0.650	0.608	0.674	0.701	0.734	<b>0.750</b>		
7	Social identity	0.608	0.464	0.555	0.589	0.615	0.602	<b>0.914</b>	
8	Structure	0.554	0.703	0.760	0.771	0.703	0.593	0.468	<b>0.829</b>

The bold diagonal shows the square root of the average variance extracted (AVE).

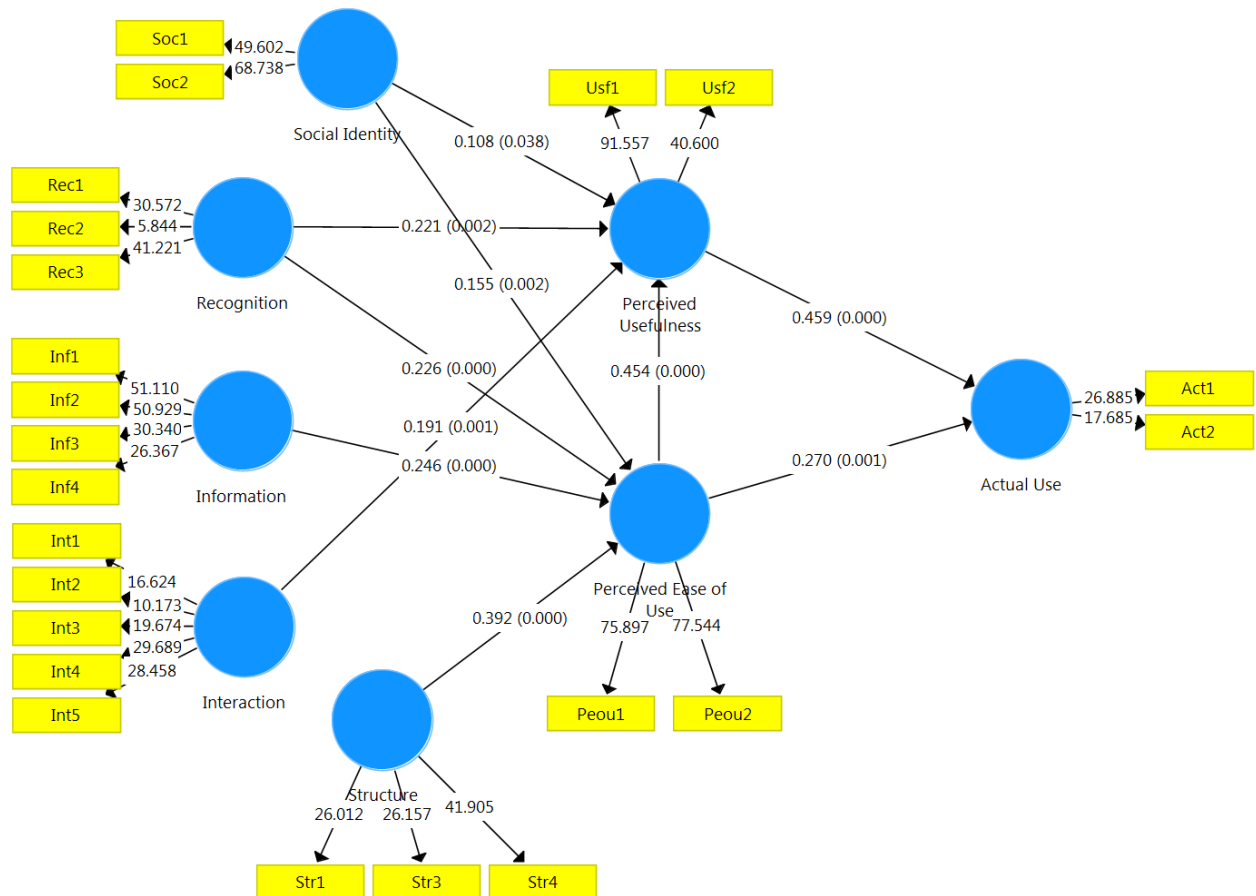
Common method variance was also tested by employing a PLS common method bias test (Lehto, Oinas-Kukkonen, & Drozd, 2012; Liang et al., 2007). The squared values of the CLF regression weights were deemed to be the percent of the indicator variance caused by method, whereas the squared regression weights of latent constructs were considered as the percent of indicator variance caused by latent constructs (Williams, Edwards, & Vandenberg, 2003).

In this case, all CLF regression weights were found non-significant at a 0.05 level of significance and the indicators' variances were considerably greater than their corresponding method variances, with the average substantively variance of the indicators being 0.72, while the average method-related variance was found to be 0.021. Therefore, common bias effects would not be expected to seriously affect the results of this study.

CFA ratified the proposed indicators for all latent variables, except for one item (Str2) of 'Structure' that was pruned, since it appeared to have a factor loading below 0.70 (Hair et al., 2010). The significance of the paths was tested using regression weights and t-statistics to calculate the corresponding p-values, based on a bootstrapping technique readily available in SmartPLS 3.0 (see Figure 2). As indicated by the path loadings and the associated significance



levels, all research hypotheses, except for H<sub>9</sub>, have been confirmed at a minimum 0.05 level of significance. In particular, all 5 OSN experience factors, i.e. social identity, information, recognition and interaction exert positive and significant effects on PU and PEOU. In the case of the relationship between structure and AU, PEOU acts as a mediator, thus supporting H<sub>10</sub> and H<sub>11</sub>. A mediating role for PU was not supported in the Structure – PU – AU path set of relationships. Furthermore, PU and PEOU indirectly mediate the effects of the OSN experience factors on AU. Finally, a second consecutive mediation emerges with PU transmitting the effect of PEOU on to AU, in addition to the direct relationship between PEOU and AU.



**Figure 2:** PLS-SEM outer and inner model (p-values in parentheses).

The proposed model has relatively good prediction power. According to Cohen (1998), squared multiple correlation -  $R^2$  values of 0.01, 0.09 and 0.25 indicate small, medium and large effects, respectively, in behavioral sciences. In our case, the model explained 0.738 or 73.8% of the variance in PU, 0.732 or 73.2% in PEOU and 0.485 or 48.5% of the variance in AU latent variable. Also, predictive relevance ( $Q^2$ ) values are important for quantifying the predictive capabilities of the structural model. The blindfolding procedure for executing the Stone-Geisser test, with an omission distance  $D=7$ , revealed that the proposed model is of high quality suggesting high predictive relevance for all endogenous constructs;  $Q^2$  values were 0.567, 0.612 and 0.293 for PU, PEOU and AU respectively thus satisfying the criterion of  $Q^2 > 0$ .

## **5. Discussion**

### *5.1 Theoretical implications*

This research investigated the influence of social networking platforms on using theme parks' information and online sales services. In doing so, we based our theoretical framework on a modified version of TAM theory (Agarwal & Karahanna, 2000; E. Kim & Lee, 2007; G. Kim et al., 2008; Kwon & Wen, 2010) in an effort to examine the effects of the five experience factors on AU for online sales, as determined by two intervening constructs, PU and PEOU (Davis, 1989). The main objective was to unravel the importance of OSN factors that contribute to online sales of theme parks products, as suggested in related and previously published research (e.g., Kirk et al., 2012; Müller-Seitz et al., 2009; Renko & Druzijanic, 2014; Rese et al., 2014).

The findings are in line with those of previous studies suggesting that both social identity (Erickson 2002; Kwon 2004) and recognition (Gretzel, 2006; Blackshaw & Nazzaro, 2006) affect PU, as well as PEOU. Moreover, our results ratify those of García-Crespo et al. (2010), providing support to the existence of the relationship between information and PU. At the same time, there is congruence with the work of Carrera et al. (2008) whose suggestion that characteristics of information provided affect website's PEOU was confirmed. The Srivastava and Kaul (2014) and Kelleher (2006) claims that OSN interaction exerts significant effects on websites' PU and PEOU are also verified in this current study. Finally, the relationship between OSN brand fan page structure and PEOU indicates the positive and significant effect that structure of the Facebook group page can have (Czerwinski & Larson, 2002). These findings imply that good information, interconnectedness, recognizability and well-structured brand fan pages can improve retail customers' product image, loyalty, overall satisfaction (Anderson & Srinivasan, 2003; Werthner & Ricci, 2004), and positively influence customer appeal, retention and online sales.

In addition, PU and PEOU function as mediators in two ways: firstly by transmitting the effects of OSN experience factors to AU (Kirk et al., 2012; Müller-Seitz et al., 2009) and secondly, by participating in a double mediation scheme, thus transmitting these factors' effects to AU, via PEOU and PU, sequentially. This last outcome, implies that PEOU exerts a positive and significant effect on PU, which has been previously reported by Rese et al. (2014). Altogether, this research confirms the significance of both PEOU and PU for predicting the actual use (AU) of an OSN in purchasing theme park retail services online (Echtner & Ritchie, 2003).

## *5.2 Managerial implications*

The findings of this study have important implications for digital marketing and event management academics, as well as theme park management practitioners. The development of web 3.0, known as the semantic web, makes content and digital services more findable and linkable (Baines, Fill, & Page, 2013). This provides OSN users with new opportunities for purchasing goods and services using built-in software applications (apps) via their favorite online platforms. From the supply side, it provides new insights and marketing tools to be used by theme parks managers in promoting and selling their products, thus nurturing the establishment of stable relationships with customers and enticing opportunities for prospects. This is further supported by customer-to-customer (C2C) communications that are an essential part of the modern interaction model of communication (Oh, Ozkaya, & LaRose, 2014). Specifically, managers should create various stimuli that would encourage use of OSN for retail transactions, e.g. by organizing online competitions and other online events to stimulate theme parks' fans interest and engagement with relevant products and services (gamification). Furthermore, service providers could potentially consider the possibility of using gamification techniques in order to enhance customers' experience (Zichermann & Cunningham, 2011) as the use of game elements may enhance online retail experience, increase consumers' engagement with online retailers (Insley & Nunan, 2014), thus further reinforcing online retail business (Brigham, 2015). As Sukhu, Zhang, and Bilgihan (2015) suggest, gamification could be tested as an antecedent for information and content sharing in OSNs by using relevant techniques such as competition, skill testing, and various incentives.

By making OSNs the main platforms for driving marketing and sales operations, theme parks may enjoy a sustainable increase in their service sales based on an enhanced customer

engagement and true loyalty (Hudson & Thal, 2013; Hutter, Hautz, Dennhardt, & Füller, 2013).

## **6. Conclusion and limitations**

This study extends prior research on consumer purchasing theory implications of social networking and their practical implications for theme park consumer activities by providing some of the first empirical evidence on the role of perceived usefulness (PU) and perceived ease of use (PEOU) in the actual purchasing and buying activities (AU) associated with the use of SN fan pages. Specifically, the findings reveal that social identity, recognition and interaction significantly and positively affect the level of perceived usefulness of the social network. In addition social identity, recognition, information and structure has a significant and positive effect on the level of perceived ease of use of a company website and its social network community. Moreover, perceived usefulness positively mediates the relationship between perceived ease of use and actual use. From a theoretical perspective, the current study addresses the changes in theme park consumers' dynamics and behavior and shows that the new technological-mediated environment supported by online social networking is now a critical factor. Practically, it also sheds light on social group behavioral factors that affect OSN users' tendency to select and purchase amusement services and gives new marketing guidelines that can serve as a basis for the effective positioning of theme parks. (Ying, Norman, & Zhou, 2016).

As with any study, this one has some limitations that should be taken into account when applying its results more generally. Although addressed in our analysis, the study obtained single-source data using a standard methodology as a snap-shot at one point in time, which brings into play the possibility of common bias effects (Doty and Glick, 1998) Another

limitation pertains to the fact that this research has conducted in Taiwan where mobile electronic usage is extensive and Asian OSN users are highly involved with the necessary technology, which may imply a higher level of actual use than other locations. Future research studies are needed to test the proposed conceptual model with different theme parks located in other places worldwide (e.g. America, Europe). Finally, this study has not classified visitors according to any characteristics of theme park visitation or OSN usage levels that could generate interesting comparative findings through use of multi-group segmentation analysis. Therefore, it would be opportune for future research studies to distinguish theme park visitors according to the total number and frequency of visits, the nature of family, friends or company they have while visiting a park and their level of usage, involvement and familiarity with social media networking.

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## Appendix A

Social Identity	Recognition	Information	Interaction	Structure	Usefulness	Actual Use
2.1. I consider my membership in E-da Facebook fan page to be very important to me	3.1 When I search the theme park on Facebook search engine is it one of the first results	4.1 Information for the address and directions to reach E-da theme park?	5.1 Let members post pictures	6.1 Section for pictures	7.1 Using E-da Facebook pages enables me acquire more information of theme park	9.1 I use the E-da Facebook page when I need to purchase theme park goods or/and services
2.2 Members' activities posted on E-da Facebook pages are important to me	3.2 When I search E-da theme park on a search engine, it is within first results	4.2. Promotional information (price, cafeteria)?	5.2 Let members post videos	6.2 Is colors' and arrangement the appropriate one	7.2 E-da Facebook page is a useful service for interaction among members	9.2 I make use of E-da promotional offers when posted on its Facebook fan page
	3.3 I am a member in more than one theme park Facebook fan pages	4.3. Theme park facilities and time of different shows?	5.3 Allow members add new members	6.3 Need authorization from an administrator to become a member	<b>Ease of Use</b>	
		4.4 E-da Theme park contact information?	5.4 Allow interaction with other members		8.1 I find E-da Facebook group pages easy to use	
			5.5 Allow to post a comment on Facebook wall		8.2 The process of using the E-da Facebook group pages is clear	



## Appendix B

	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Inf1	234	-.468	.159	.082	.317
Inf2	234	-.323	.159	-.059	.317
Inf3	234	-.263	.159	-.136	.317
Inf4	234	-.666	.159	.391	.317
Int1	234	-.399	.159	.174	.317
Int2	234	-.197	.159	.053	.317
Int3	234	-.331	.159	.212	.317
Int4	234	-.113	.159	-.140	.317
Int5	234	-.640	.159	.892	.317
Str1	234	-.569	.159	.131	.317
Str2	234	-.402	.159	-.370	.317
Str3	234	-.499	.159	.107	.317
Str4	234	-.565	.159	.278	.317
Rec1	234	-.155	.159	-.292	.317
Rec2	234	-.742	.159	.102	.317
Rec3	234	-.226	.159	.143	.317
Usf1	234	-.445	.159	.199	.317
Usf2	234	-.347	.159	-.035	.317
Peou1	234	-.345	.159	.123	.317
Peou2	234	-.327	.159	.018	.317
Act1	234	-.133	.159	-.493	.317
Act2	234	-.187	.159	.056	.317
Soc1	234	-.241	.159	-.575	.317
Soc2	234	-.255	.159	-.166	.317